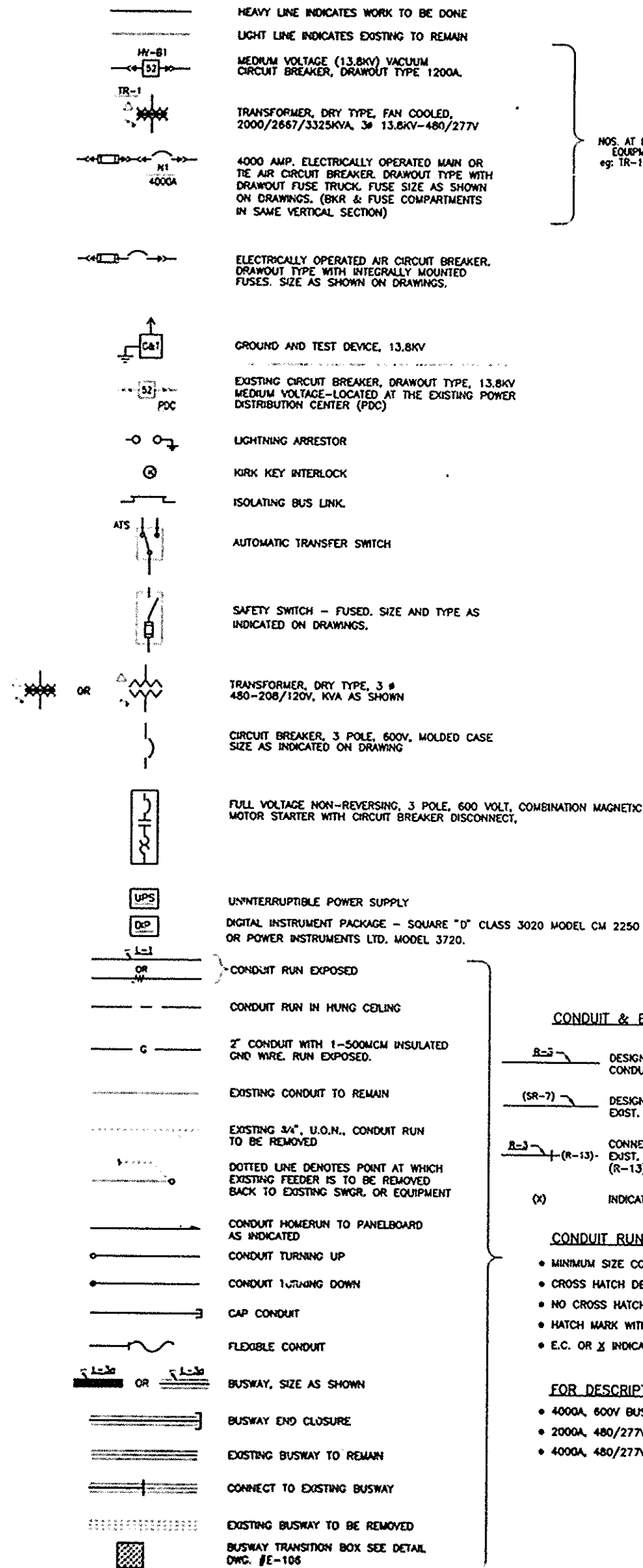


LEGEND



NOS. AT END OF DESIGNATION INDICATE EQUIPMENT ASSOCIATED WITH BUS
 eg. TR-1 TRANSFORMER SUPPLY BUS #1

CONDUIT & BUSWAY DESIGNATIONS

- DESIGNATION UNDERLINED INDICATES CONDUIT DESIGNATION.**
- DESIGNATION IN PARENTHESIS INDICATES EXIST. CONDUIT DESIGNATION TO REMAIN**
- CONNECT TO EXISTING CONDUIT, CHANGE EXIST. DESIGNATION, e.g. EXIST. CONDUIT (R-13) BECOMES R-3.**
- INDICATES EMPTY CONDUIT**

CONDUIT RUNS WITHOUT DESIGNATIONS

- MINIMUM SIZE CONDUIT SHALL BE 3/4".**
- CROSS HATCH DENOTES NUMBER OF #12 WIRE.**
- NO CROSS HATCH INDICATES 2 #12 & 1 #12 GND.**
- HATCH MARK WITH TAIL INDICATES #12 GND WIRE.**
- E.C. OR X INDICATES EMPTY CONDUIT.**

FOR DESCRIPTION OF BUSWAY:

- 4000A, 600V BUSWAY - SEE NOTE #3, DWG. #E-3**
- 2000A, 480/277V BUSWAY, SEE NOTE #16**
- 4000A, 480/277V TEMPORARY BUSWAY DWG. #E-2**

- FLUORESCENT LIGHTING FIXTURE (1' X 4')**
- FLUORESCENT LIGHTING FIXTURE (2' X 2')**
- INCANDESCENT LIGHTING FIXTURE**
- CEILING MOUNTED EXIT LIGHT FIXTURE WITH 8" RED LETTERS, SINGLE OR DOUBLE FACE AS INDICATED BY FILLED IN AREA, WITH DIRECTIONAL ARROWS AS INDICATED. SIGN FACE TO BE POSITIONED AS SHOWN BY CROSS-BAR.**
- EXIT LIGHT SAME AS ABOVE EXCEPT WALL MOUNTED**
- EXISTING (1' X 4') FLUORESCENT LIGHTING FIXTURE TO REMAIN**
- SINGLE POLE TOGGLE SWITCH 20A, 120-277V, SURFACE MOUNTED**
- THREE WAY TOGGLE SWITCH 20A, 120-277V, SURFACE MOUNTED**
- FOUR WAY TOGGLE SWITCH 20A, 120-277V, SURFACE MOUNTED**
- SINGLE POLE TOGGLE SWITCH WITH RED PILOT LIGHT RATED 15A, 120V SURFACE MOUNTED**
- 480V, 3P 20A, TWIST LOCK RECEPTACLE, NEMA L16-20R SURFACE MOUNTED**
- DUPLEX RECEPTACLE, 125V-15A, NEMA 5-15R, SURFACE MOUNTED**
- MOTOR**
- EXISTING MOTOR**
- MOTOR LOCK-OUT KEY SWITCH IN CAST DEVICE BOX, KEY TO MATCH EXIST. KEYING SYSTEM.**
- SOLENOID VALVE - 24V DC-SEE MECHANICAL DWG. FOR DESCRIPTION.**
- THERMOSTAT - SEE MECHANICAL DRAWINGS FOR DESCRIPTION**
- JUNCTION BOX**
- WATTHOUR METER AND PAN**
- EXISTING WATTHOUR METER CABINET**
- TRANSFORMER - DRY TYPE SIZE AND VOLTAGE AS SHOWN ON CONTRACT DRAWINGS**
- COMBINATION STARTER WITH CIRCUIT BREAKER DISCONNECT**
- TELEPHONE OUTLET**
- AUTOMATIC TRANSFER SWITCH**
- EXISTING AUTOMATIC TRANSFER SWITCH**
- DISTRIBUTION PANEL - 480/277V, 3# SURFACE MOUNTED**
- DISTRIBUTION PANEL - 208/120V, 3# SURFACE MOUNTED**

FOR COMPLETE DESCRIPTION AND FEATURES SEE LIGHTING FIXTURE SCHEDULE ON DRAWING #E-2

MOUNTING HEIGHT 48" A.F.F. TO 6" OF SWITCH

MOUNTING HEIGHT 15" A.F.F. TO 6" OF RECEPTACLE

NUMBER INDICATES HORSEPOWER

FIRE ALARM EQUIPMENT

ALL FIRE ALARM EQUIPMENT SHALL BE CENBRUS PYROTRONICS, NO SUBSTITUTION.

- ADDRESSABLE PULL STATION, MODEL #MSI-CS2 METAL, SURFACE MOUNTED, CLASS E WITH NYC WHITE STRIP.**
- ADDRESSABLE IONIZATION HIGH VELOCITY SMOKE DETECTOR MODEL #10-80A & BASE #DB-35.**
- ADDRESSABLE AIR DUCT SMOKE DETECTOR MODEL #10-80B WITH HOUSING #DB-13RS & SAMPLING TUBE #STA**
- TRI-60R ADDRESSABLE INTERFACE MODULE WITH RELAY MOUNTED IN DOUBLE GANG SWITCHBOX**
- TRI-60D DUAL ADDRESSABLE INTERFACE SWITCH MODULE MOUNTED IN DOUBLE GANG SWITCHBOX**
- TAMPER SWITCH**
- WATER FLOW SWITCH**
- STROBE SPEAKER, MODEL #SSPK-7070H WITH SPEAKER AND ADA STROBE, SURFACE MOUNTED, MOUNTING HEIGHT 80" ABOVE FINISHED FLOOR.**
- "F1" - INDICATES 1PR TW SH #16 AWG IN CONDUIT**
- "F2" - INDICATES SAME AS ABOVE EXCEPT NOT SHIELDED**
- "F3" - INDICATES 1PR TW SH #14 AWG IN CONDUIT**
- "F4" - INDICATES SAME AS ABOVE EXCEPT NOT SHIELDED**
- EXISTING MANUAL PULL STATION**
- EXISTING SMOKE DETECTOR**
- EXISTING DUCT DETECTOR**
- FIRE ALARM REMOTE ALARM LAMP**
- SPEAKER TO REMAIN**

NUMBER IN FRONT OF CABLE TYPE INDICATES QUANTITY OF CABLES (i.e. 10-E1)

R INDICATES RELOCATE AS SHOWN ON PLAN

NOTES

- 1 - FOR GENERAL NOTES, ABBREVIATIONS AND LIGHTING FIXTURE SCHEDULE SEE DRAWING #E-2.**

REMOVAL

- FLUORESCENT FIXTURE - PENDANT OR CEILING MTD.**
- FLUORESCENT FIXTURE - WALL MOUNTED**
- INCANDESCENT FIXTURE**
- DISCONNECT SWITCH**
- 480V, 3# RECEPTACLE**
- DUPLEX RECEPTACLE**
- MOTOR - HP SHOWN**
- MOTOR LOCK-OUT KEY SWITCH**
- MANUAL STARTER**
- JUNCTION BOX**
- SWITCH**
- SWITCH WITH PILOT LIGHT**
- EXIST. COT IN FLOOR, REMOVE WIRE**
- REMOTE ALARM LAMP**
- METER**
- THERMOSTAT**
- MANUAL PULL STATION**
- SMOKE DETECTOR**
- DUCT DETECTOR**
- STROBE HORN**
- SOLENOID VALVE**
- UNIT HEATER**
- TELEPHONE OUTLET**
- RADIO TRANSMITTER TO BE RELOCATED**
- RELOCATE EXISTING EQUIPMENT**

NOTE:

III - INDICATES DEVICE TO BE REMOVED IN STAGE III

CARD ACCESS SYSTEM

- CARD READER.**
- EXIT PUSH BAR.**
- DOOR POSITION SWITCH**
- TAMPER PROOF JUNCTION BOX WITH TERMINAL BLOCK**
- CARD READER TO BE RELOCATED**
- EXIT PUSH BUTTON TO BE REMOVED**
- BREAK GLASS SWITCH TO BE REMOVED**

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. WTC-802.071 IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 6/21/95 *Santhan A. Askan* SPEC. WRITER

DATE 7/3/95 *Peter K. Sweeney* ENGINEER OF DESIGN



THE PORT AUTHORITY OF NY & NJ

Peter K. Sweeney
 ENGINEERING PROGRAM MANAGER
 WORLD TRADE CENTER
 CHIEF ELECTRICAL ENGINEER

Engineering Department
 Design Divisions
The World Trade Center
Electrical/HVAC Upgrade Program

Title
TOWER ONE AND TWO LOW VOLTAGE SUBSTATIONS CONSTRUCTION AND INSTALLATION
ELECTRICAL LEGEND

No. Date Revision Approved

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

ROYZMAN
 FISCHER
 Designed by Drawn by Checked by

Date 5-1-95 Scale NONE

Contract Number Drawing Number
WTC 802.071 E-1